



# RTD initiatives on knowledge and data management

Jornada Proyecto Vigilancia Sectorial de I+D

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# The EC-OECD STIP COMPASS

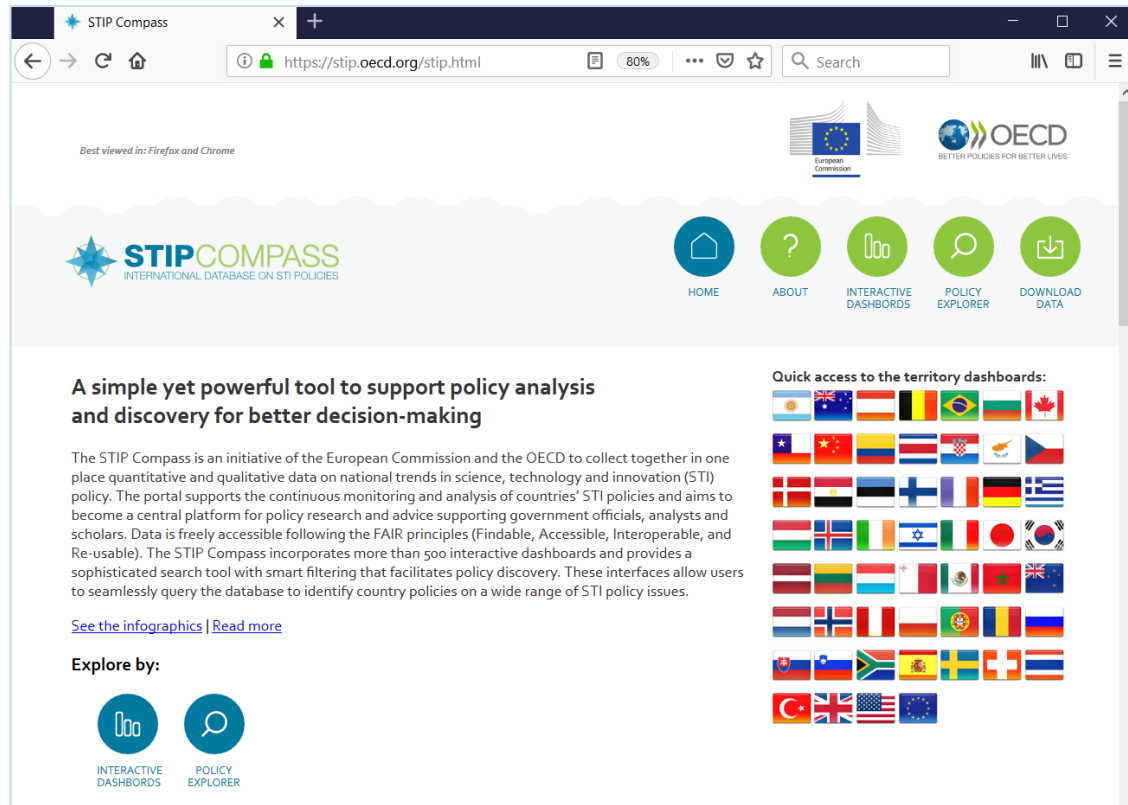
<https://stip.oecd.org/stip.html>

# Objectives of the EC-OECD collaboration

- Since 2015, the OECD and the EC decided to join their respective STI policy monitoring initiatives in order to
  - > **streamline and reduce the reporting burden on countries/ avoid duplication of efforts**  
*(also following the Council Conclusions under the Maltese Presidency)*
  - > **widen the diffusion of results in order to enhance the EC-OECD STIP Survey impact**

# What is the STIP Compass?

- **An *integrated knowledge management platform*** for collecting, storing, linking, visualising, finding and analysing information on countries' STI policies
- **Fully open (FAIR)**– anyone can use the platform and download the data
- **Jointly implemented by EC and OECD team**
- **Beta version launched in April 2018**



The screenshot shows the STIP Compass website in a browser window. The URL is <https://stip.oecd.org/stip.html>. The page features the logos of the European Commission and the OECD. The main navigation menu includes: HOME, ABOUT, INTERACTIVE DASHBOARDS, POLICY EXPLORER, and DOWNLOAD DATA. A central text block reads: "A simple yet powerful tool to support policy analysis and discovery for better decision-making". Below this, it states: "The STIP Compass is an initiative of the European Commission and the OECD to collect together in one place quantitative and qualitative data on national trends in science, technology and innovation (STI) policy. The portal supports the continuous monitoring and analysis of countries' STI policies and aims to become a central platform for policy research and advice supporting government officials, analysts and scholars. Data is freely accessible following the FAIR principles (Findable, Accessible, Interoperable, and Re-usable). The STIP Compass incorporates more than 500 interactive dashboards and provides a sophisticated search tool with smart filtering that facilitates policy discovery. These interfaces allow users to seamlessly query the database to identify country policies on a wide range of STI policy issues." There are links for "See the infographics" and "Read more". A section titled "Explore by:" shows icons for "INTERACTIVE DASHBOARDS" and "POLICY EXPLORER". On the right, a "Quick access to the territory dashboards:" section displays a grid of 48 national flags.

# What data does STIP Compass integrate?

- *The EC/OECD STI Policy **survey** is the main data source: **+6000 policy initiatives from +50 countries***
- *Semantic integration with **linked data**:*
  - **2,000+ OECD STI policy-related publications (i-Library)**
  - **2,000+ EC publications**
  - **5,000+ ScienceDirect academic papers from relevant journals**
  - **Currently 27 statistical indicators from OECD.Stat**

## *Next steps:*

- **Linking 400+ statistical indicators to policy initiative data and adding a quantitative data visualisation tool**
- **Embedding 100s of relevant RSS and Twitter feeds in country pages**

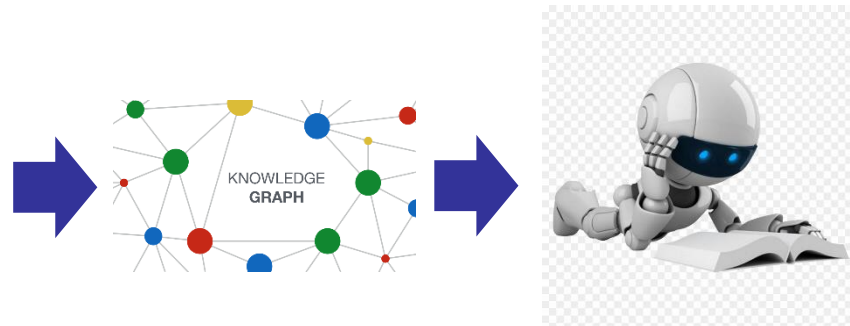
# STIP Compass components

*Components are seamlessly linked through the knowledge graph*

Online survey /  
policy monitoring  
tool, based on open  
source LimeSurvey  
software



Knowledge graph for linking and  
organising data and generating  
the survey structure specific to  
STI policy



Algorithmic robots for identifying and  
tagging relevant information collected  
through the survey, but also from  
other (internal and external) sources

Semantic database,  
using proprietary  
MarkLogic software

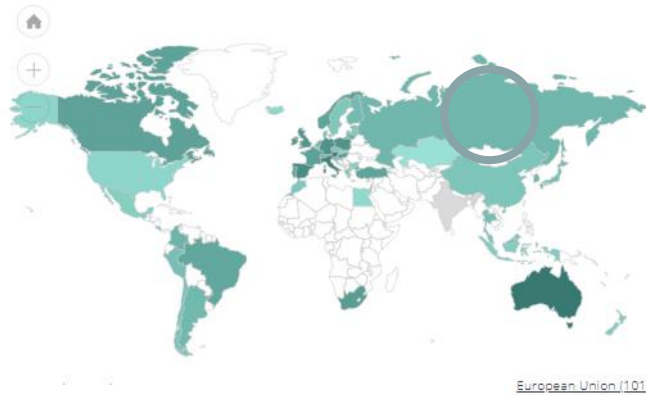


Graphical user  
interfaces, incl.  
>500 interactive  
dashboards

# Interactive dashboards

## Structured data → Semantic visualisation tools

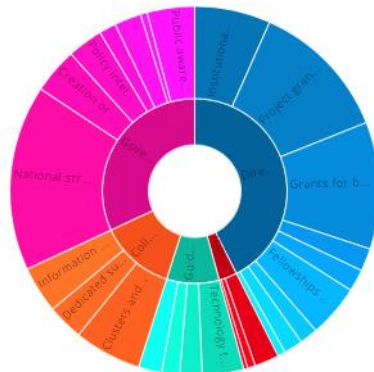
### Territories



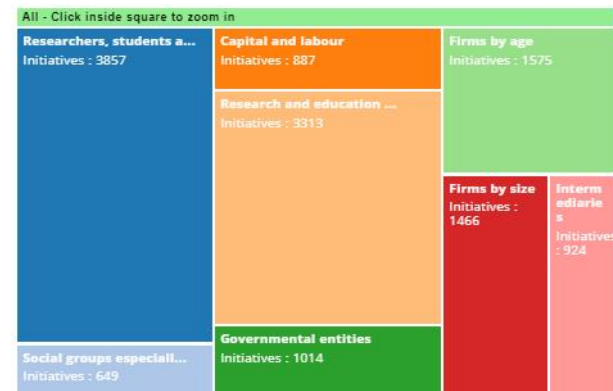
### Themes



### Policy instruments



### Target groups



# Policy explorer: search and discovery



Powered by **O.N.E SIGHT**

artificial intelligence
✕ 🔍 📄

8 results for artificial intelligence
Results per page : 10 20 50

STIP country (3) ✕

**CHINESE ASSOCIATION FOR ARTIFICIAL INTELLIGENCE**

STIP policy initiatives and instruments (2017) | Policy initiative

The association was established to support research on artificial intelligence in China.

[- Show more details](#)

Science, technology and innovation (STI) policy and governance in the Russian Federation now focus on the new Strategy of Scientific Technology ...

STIP policy initiatives and instruments (2017) | Policy debate

Science, technology and innovation (STI) policy and governance in the Russian Federation now focus on the new Strategy of Scientific Technology Development of the Russian Federation, adopted by the President of the Russian Federation through Decree ...

[- Show more details](#)

**Programme Digital Economy of Russia**

STIP policy initiatives and instruments (2017) | Policy initiative

Supporting digitalisation of the Russian economy

[- Show more details](#)

Despite the recent economic crisis, which impacted on the funding of research and development (R&D), the debates on government support for business ...

STIP policy initiatives and instruments (2017) | Policy debate

Despite the recent economic crisis, which impacted on the funding of research and development (R&D), the debates on government support for business innovation and innovative entrepreneurship have advanced on some important issues. The parliamentary ...

[- Show more details](#)

Digitalisation has been a key factor in the Chinese economy's growth, hence the need to increase access to Internet connections, cultivate ...

STIP policy initiatives and instruments (2017) | Policy debate

Digitalisation has been a key factor in the Chinese economy's growth, hence the need to increase access to

**NATIONAL TECHNOLOGY INITIATIVE - NTI**

STIP policy initiatives and instruments (2017) | Policy initiative

Programme for creation of fundamentally new markets and the creation of conditions for global technological leadership of Russia by 2035.

[- Show more details](#)

**INTERNET PLUS**

STIP policy initiatives and instruments (2017) | Policy initiative

The action plan aims to increase competitiveness of Chinese firms through application of digital technologies.

[- Show more details](#)

**NATIONAL ENGINEERING LABORATORY FOR DEEP**

**REFINE AND DISCOVER TOOLS** ✕

REFINE
DISCOVERY

**LIBRARIES** ^

STIP policy initiatives and instruments (2017) <sup>[52]</sup>

**STIP COUNTRY** ^

- Austria <sup>[2]</sup>
- Brazil <sup>[1]</sup>
- Brussels Capital <sup>[2]</sup>
- Canada <sup>[5]</sup>
- China <sup>[4]</sup>
- Colombia <sup>[1]</sup>
- Finland <sup>[5]</sup>
- France <sup>[3]</sup>
- Germany <sup>[2]</sup>
- Italy <sup>[1]</sup>
- Luxembourg <sup>[1]</sup>
- Malta <sup>[1]</sup>
- Morocco <sup>[2]</sup>
- Netherlands <sup>[1]</sup>
- Norway <sup>[1]</sup>
- Poland <sup>[2]</sup>
- Portugal <sup>[2]</sup>
- Republic of Korea <sup>[2]</sup>
- Russian Federation <sup>[3]</sup>
- Slovak Republic <sup>[1]</sup>
- Slovenia <sup>[1]</sup>
- Thailand <sup>[2]</sup>
- United Kingdom <sup>[6]</sup>
- United States <sup>[1]</sup>

**DATES** v

**TOPICS IDENTIFIED FROM THE RESULT SET** v

**GEOGRAPHICAL AREAS IDENTIFIED FROM THE RESULT SET** v



# Query builder

- **Download** the latest policy initiatives **of interest for policy analysts and researchers** by filtering the database across all its dimensions.
- **API** for a **100% portable database**: Other projects can **build queries** as live URLs that yield XML files with the latest data.

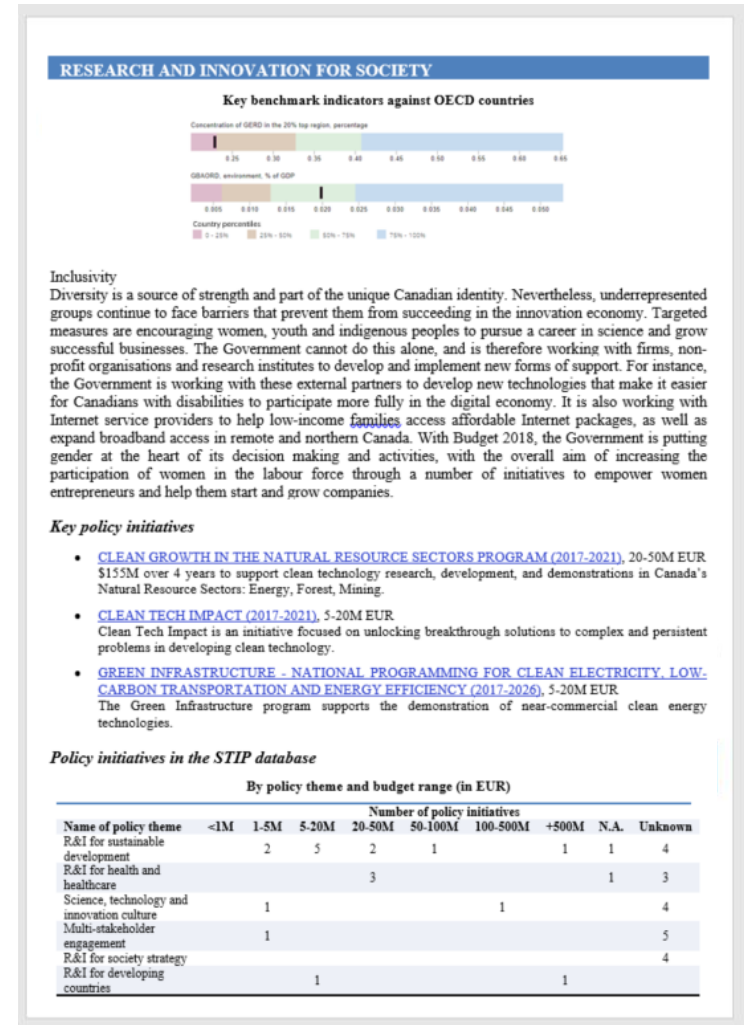
The screenshot shows the STIP COMPASS query builder interface. At the top left is the logo, a blue star-like shape, followed by the text "STIP COMPASS" in green and "INTERNATIONAL DATABASE ON STI POLICIES" in black. Below the logo are several filter sections:

- Output format for the data:** Two radio buttons, "XML" (selected) and "CSV". A note below the CSV option reads: "Due to UTF-8 encoding and line-breaks in data, import into GoogleDoc rather than into Excel".
- Territories:** A text input field with the placeholder "Filter by territory...".
- Yearly budget ranges:** A horizontal slider with "Less than 1M" on the left and "More than 500M" on the right. Below the slider are three checkboxes: "Without budget range", "Not applicable", and "Don't know".
- Policy instruments:** A text input field with the placeholder "Filter by policy instrument...".
- Themes:** A text input field with the placeholder "Filter by theme...".
- Target groups:** A text input field with the placeholder "Filter by target group...".
- Filter by initiative start year:** A checkbox "Include initiatives starting between" followed by a timeline with markers for 1980 and 2020.
- Filter by initiative end year:** A checkbox "Include initiatives ending between" followed by a timeline with markers for 2008 and 2021.

At the bottom of the interface, it displays "5265 policy initiatives" and provides citation information: "Please cite the database as: EC/OECD (2019), STIP Compass: International Database on Science, Technology and Innovation Policy (STIP), edition 16 January 2019, <https://stip.oecd.org>". To the right of this text is a green "DOWNLOAD" button and a link icon with the text "Or copy URL to clipboard".

# Country profile (dashboard printout)

- **Print-out generated from the country dashboard.**
- **Data at a glance** introductory section, including:
  - Number of policy initiatives reported
  - Key responsible organisations
  - National strategies in operation
  - Main policy initiatives in operation
- **A section for each policy area in the database**, including:
  - Main current issues of debate
  - Key policy initiatives
  - Table with the number of initiatives in the database by policy theme



# Notes of caution

- The data consists of self-reported descriptions of (mostly) national STI policy initiatives, collected through the biennial EC-OECD STI Policy survey of (mostly) government ministries.
- While the EC and OECD strive towards a harmonised approach for reporting policy initiatives, countries still vary in the ways they report their STI policies.
- Some countries have provided complete and detailed information on their policy initiatives, others less so.
- This is essential to keep in mind when doing cross-country comparisons.



**Increase data quality control** checks (EC and OECD Country-Desks, more involvement of countries, regular update of initiatives throughout the year,...)

# H2020 Dashboards

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard>



# Horizon Dashboard: Key elements

## Dashboard Concept

- Frequently refreshed, one click stop shop,
- Modern visual analytics (data discovery tool),
- Complete picture - more than a dashboard:  
(ongoing and finalized H2020 projects, subscription rates...)

## Purpose and Audience

- EU Member and Associated States, R&I Community,
- EC R&I monitoring and implementation of the policy instruments,
- Accessibility @ F&T portal (go public, go mobile)

# Horizon Dashboard: Highlights

- **Public access on F&T Portal,**
- **Refresh rate (monthly),**
- **Functionalities (+data export, visualization customize)**

## Coverage:

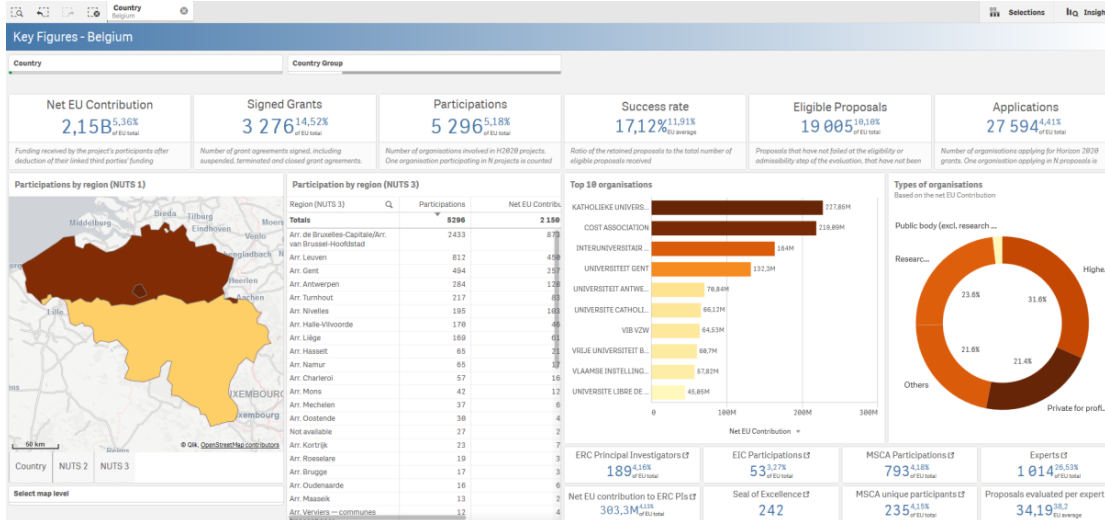
- **H2020 and FP7 Implementation figures: incl. success rates, participation trends, Country Profiles,**
- **Reports on Specific focus areas: EIC Pilot, SoE, Regional data,**
- **H2020 project results, notably: IPRs and Scientific publications**

# Horizon Dashboard: H2020 Country Profiles

- Detailed figures on a specific country (projects, participations),
- KPIs on the involvement in Horizon 2020,
- Overview by programme part, SME performance,
- Comparisons with other countries,
- Indicators on the R&D landscape

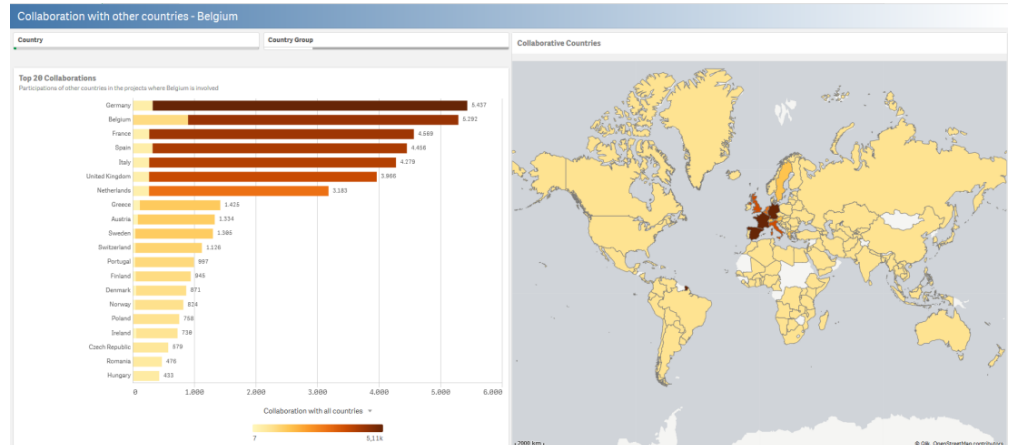


# Horizon 2020 Country Profile visualisations



- Main organisations and NUTS regions from the country

- Representations on the map



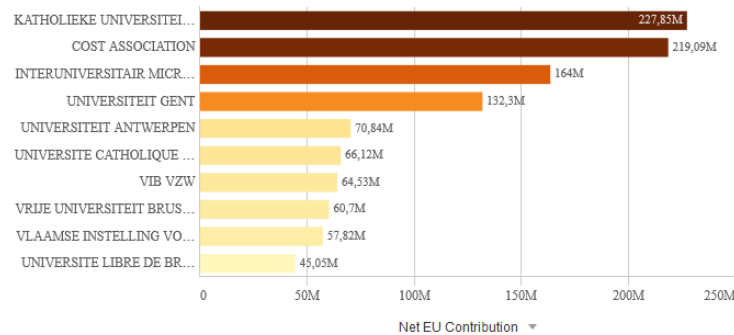




# Horizon 2020 Country Profile summary page

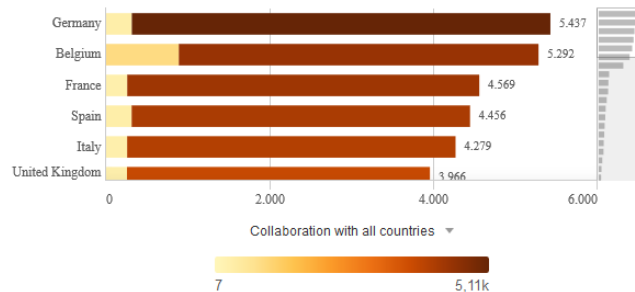
- Printable version of the key figures on a selected country
- Available to the general public

## Top 10 organisations



## Top 20 Collaborations

Participations of other countries in the projects where Belgium is involved



## Horizon 2020 country participation Belgium

### Belgium Horizon 2020 country profile

#### Horizon 2020 Key Figures

Print



#### Participation in Horizon 2020

